

**John Harry MacMillan Ph.D.**

**Chemistry URL's**



**Below are listed in chronological order my complete URL list of Chemistry Abstracts, Papers and Patents. Download freely any material of interest.**

**1. Thomas R.P. Gibb Jr. and John H. MacMillan, "Line Broadening in the X-Ray Diffraction Patterns of the Vanadium Hydride System", Tufts University, Undergraduate Thesis, 1966.**

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**2. Thomas R.P. Gibb Jr., J.H. MacMillan and R.J. Roy, "The Magnetic Susceptibility of Palladium Hydride", J. Phys. Chem., Vol. 70, p3024 (1966).**

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**2a. Thomas R.P. Gibb Jr. and John H. MacMillan, "Magnetic Susceptibility Effects on Removal of Hydrogen from Beta Phase Palladium Hydride", Tufts University, Undergraduate Thesis, 1966.**

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**3. Alfred Viola and John H. MacMillan, "Vapor Phase Thermolysis of 1-Hexen-5-yn-3-ol An Acetylenic Oxy-Cope Reaction" J. Amer. Chem. Soc., Vol. 90, p 6141, (1968).**

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**4. Alfred Viola and John H. MacMillan, "A Novel Steric Effect in the Thermolysis of Prop-2-ynyl Vinyl Carbinols" Chemical Communications p 301, (1970). [FULL PAPER](#)** (Google Document)

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**5. Alfred Viola and John H. MacMillan, "The Vapor Phase Acetylenic Oxy-Cope Reaction of 5-Hexen-1-yn-3-ol , The Chemistry of an Allenol Intermediate", J. Amer. Chem. Soc., Vol. 92 p 2404, (1970).**

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**6. Alfred Viola and John H. MacMillan, "Addition of Grignard Reagents to Allylic and Propargylic Alcohols", J.H. MacMillan, Ph.D. Thesis, Northeastern University, 1970.**

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6a. John H. MacMillan and Alfred Viola,  
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7. Alfred Viola and John H. MacMillan, " Investigation of Possible Phenyl Participation in the Oxy-Cope and Acetylenic Oxy-Cope Rearrangements" J.H. MacMillan, Ph.D. Thesis, Northeastern University, 1970.

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8. "Triple Bond Participation in the Oxy-Cope Rearrangement", John H. MacMillan, Ph.D. Thesis, Northeastern University, 1970.

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9. Alfred Viola and John H. MacMillan, "Vapor Phase Thermolysis of 1,5-Hexadiynes, Effect of Hydroxyl Substitution". Presented at the 159th National Meeting of the American Chemical Society Houston Texas, February 1970, Abstract # ORGN 50.

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**9a. John H. MacMillan and Alfred Viola "The Acetylenic-Oxy-Cope Rearrangement of 1,5-Hexadiyne-3-ol and Methyl Substituted Derivatives", Internet Archive, 2012.**

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**10. Alfred Viola, John H. MacMillan, Robert J. Proverb and Brian L. Yates, "Participation of Acetylenic Bonds in Pericyclic Reactions, Thermal Cleavage of Beta-Hydroxyacetylenes", J. Amer. Chem. Soc., Vol. 93 p 6967, (1971).**

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**11. Alfred Viola, John H. MacMillan, Robert J. Proverb and Brian L. Yates, "Reaction Rates by Flow System Thermolysis, The Competitive Components of the Oxy-Cope Reaction", Chemical Communications, p 936, (1971).**

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**12. John H. MacMillan and Stephen S. Washburne, "Further Studies of the Interaction of Carbonyl Compounds with Organometallic Azides, the Novel Reaction of Benzoquinone with Trimethylsilyl Azide", Report of Investigators to the National Cancer Institute, 1972.**

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**13. "Further Studies of the Interaction of Carbonyl Compounds with Organometallic Azides, the Reaction of Naphthoquinones with Trimethylsilyl Azide",**

**Report of Investigators to the National Cancer Institute, 1972.**

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**14. John H. MacMillan and Stephen S. Washburne "Further Studies of the Interaction of Carbonyl Compounds with Organometallic Azides, the Reaction of Acrylonitrile with Trimethylsilyl Azide".**

**Report of Investigators to the National Cancer Institute, 1973.**

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**15. John H. MacMillan and Stephen S. Washburne, "Interaction of Carbonyl Compounds with Organometallic Azides Part V., Sorboyl Chloride and its Conversion to an Alpha-Pyridone", J. Org. Chem., Vol. 38, p 2982, (1973).**

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**17. John H. MacMillan, "Recent Examples of Selectivity in Catalysis" Strem Chemiker, Vol. 11 No. 2, July 1974.**

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**18. John H. MacMillan, Michael E. Strem, Fredrick A. Fowler and George Guy, "An Improved Method for the Preparation of Bis-Diphenylphosphino Acetylene and unsymmetrical Aryl Substituted Diphenylphosphino Acetylenes", Strem Chemiker, Vol. 11, No. 2, July 1974.**

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**19. James D. Warren, John H. MacMillan and Stephen S. Washburne, "Synthesis of Substituted 2H-1,3-Oxazine-2,6-Diones by Reaction of Trimethylsilyl Azide with Maleic Anhydrides", J.Org.Chem., Vol. 40, p 743, (1975).**

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20. John H. MacMillan and Stephen S. Washburne, "Further Investigation of the Interaction of Trimethylsilyl Azide with Substituted Maleic Anhydrides, Synthesis of 4-and 5-Aryl Substituted 1,3(3H) Oxazine-2,6-Diones", J.Heterocyclic Chemistry, Vol. 12, p 1215, (1975).

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21. Mark Lenhart, John H. MacMillan, Alice Maragliano and Steven S. Washburne, "A Facile General Synthesis of Aryl Maleic Anhydrides", Temple University, 1976. Presented at the 10th Middle Atlantic Regional Meeting of the American Chemical Society Philadelphia Pa. February, 1976, Paper # 10, Undergraduate research.

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**25. John H. MacMillan and Mortimer M. Labes, "Induced Phases in Terminal Mixtures of Polar Liquid Crystalline Amines and Nitriles", Mol. Crystals and Liquid Crystals Letters, Vol. 56, p7, (1979).**

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**26. John H. MacMillan and Mortimer M. Labes, "Low Transition Temperature Liquid Crystalline Amines Incorporating the Biphenyl Ring System", Mol. Crystals and Liquid Crystals Letters, Vol. 56, p51, (1979).**

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**27. John H. MacMillan and Mortimer M. Labes, "Synthesis and Photochemistry of Chiral Liquid Crystalline Nitrones", Poster Session Gordon Research Conference, Liquid Crystals Santa Barbara, California, January, 1980.**



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**29. John H. MacMillan and Mortimer M. Labes, "Amine Substituted Liquid Crystal Compositions", U.S. Patent #4,293,193, Oct. 6, 1981.**

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**Beaver College, (Arcadia University), 1992.**

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**33. "Virtual Chemistry Laboratory for Non-Science Majors, Good or Bad?", John H. MacMillan Ph.D.**

**Beaver College, (Arcadia University), 1995.**

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**34. John H. MacMillan, "Using Silanes as Adhesion Promoters", United Chemical Technologies Technical Workshop, 1997, Presented at 214th Meeting of the American Chemical Society, Los Vegas, Nevada 1997, and the 215th Meeting of the American Chemical Society, Dallas ,Texas , 1998.**

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**35. John H. MacMillan, "Formulating Silicone Adhesives, Rubbers and Gels",  
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**36. John H. MacMillan, "Silane Surface Modifying Reagents", United Chemical  
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**43. John H. MacMillan " Oxidative dehydration of aryl substituted succinic acids with selenium dioxide; 4-Bromophenyl maleic anhydride".**

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**44. John H. MacMillan "Nitrogen insertion reaction of trimethylsilyl azide with aryl substituted maleic anhydrides, yielding aryl substituted 1,3(3H) oxazine-2,6-diones; 4-(4-bromophenyl)-1,3(3H) oxazine-2,6-dione".**

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**45. John H. MacMillan "Oxazine-2,6-dione *N*-methylation with dimethyl sulfate; *N*-Methyl-4-(4-methylphenyl)-1,3(3H)-oxazine-2,6-dione".**

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**46. John H. MacMillan and Alfred Viola, " Preparation of acetylenic alcohols by addition of propargyl Grignard reagents activated at low temperatures with mercury ion to  $\alpha,\beta$ -unsaturated aldehydes and ketones", Internet Archive, 2012.**

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**47. John H. MacMillan "Addition of propargyl Grignard to aldehyde; 1-Phenyl-3-butyne-1-ol".**

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